

# Appendix E

## Cost Estimate

**Lone Tree Overpass Cost Estimate**

Mobilization & Traffic Control	Unit	Quantity	Unit Cost	Total Cost
Mobilization	LS	1	\$ 2,200,000.00	\$ 2,200,000
Traffic Control	LS	1	\$ 1,400,000.00	\$ 1,400,000
<i>Mobilization and Traffic Control Total</i>				\$ 3,600,000
Removals and Remediation	Unit	Quantity	Unit Cost	Total Cost
Remove Buildings & Obstructions	LS	1	\$ 550,000.00	\$ 550,000
Remove Pavement	SY	3,335	\$ 4.00	\$ 13,340
Remove Curb & Gutter	LF	3,540	\$ 7.00	\$ 24,780
Remediation	LS	1	\$ 100,000.00	\$ 100,000
<i>Removals and Remediation Total</i>				\$ 688,120
Earthwork*	Unit	Quantity	Unit Cost	Total Cost
Excavation	CY	187,300	\$ 8.00	\$ 1,498,400
Furnish Water Supply	(10% of Total Earthwork Cost)			\$ 149,840
<i>Earthwork Total</i>				\$ 1,648,240
Railroad Improvements	Unit	Quantity	Unit Cost	Total Cost
Remove Track (Net Salvage)	TF	26,100	\$ 25.00	\$ 652,500
New Track	TF	29,200	\$ 160.00	\$ 4,672,000
Subballast	TON	38,900	\$ 28.00	\$ 1,089,200
Line Over	EA	8	\$ 25,000.00	\$ 200,000
Switch (Electric)	EA	2	\$ 250,000.00	\$ 500,000
Switch (Manual)	EA	8	\$ 100,000.00	\$ 800,000
Signalization	LS	1	\$ 100,000.00	\$ 100,000
<i>Railroad Improvements Total</i>				\$ 8,013,700
Structures	Unit	Quantity	Unit Cost	Total Cost
Bridge	SF	58,210	\$ 170.00	\$ 9,895,700
Retaining Wall	SF	18,000	\$ 55.00	\$ 990,000
Aesthetic Treatment	LS	1	\$ 250,000.00	\$ 250,000
<i>Structure Total</i>				\$ 11,135,700
Roadway Improvements	Unit	Quantity	Unit Cost	Total Cost
AC Pavement	SY	21,145	\$ 36.00	\$ 761,220
Concrete Curb and Gutter	LF	12,820	\$ 22.00	\$ 282,040
Mill & Overlay	SY	20,530	\$ 5.00	\$ 102,650
Concrete Sidewalk	SF	71,900	\$ 6.00	\$ 431,400
<i>Roadway Total</i>				\$ 1,577,310

Utilities	Unit	Quantity	Unit Cost	Total Cost
New 8" Water Line	LF	3,500	\$ 90.00	\$ 315,000.00
New 8" Sewer Line	LF	2,900	\$ 80.00	\$ 232,000.00
New Fire Hydrant	EA	4	\$ 4,200.00	\$ 16,800.00
New Street Light	EA	10	\$ 3,800.00	\$ 38,000.00
New 5' Sewer Manhole	EA	10	\$ 4,800.00	\$ 48,000.00
8" Valve, Box and Cover	EA	7	\$ 700.00	\$ 4,900.00
Remove Existing Sewer Line	LF	1,210	\$ 17.00	\$ 20,570.00
Remove Existing Water Line	LF	1,420	\$ 15.00	\$ 21,300.00
Connect to Existing Manhole	EA	2	\$ 1,000.00	\$ 2,000.00
Utility Trench	LF	3,500	\$ 5.00	\$ 17,500.00
Prior Rights Allowance	LS	1	\$ 50,000.00	\$ 50,000.00
New Fiber Optic (BNSF)	LS	1	\$ 165,000.00	\$ 165,000.00
<i>Utility Total</i>				\$ 931,070.00
Drainage Improvements	Unit	Quantity	Unit Cost	Total Cost
Removal of Pipe	LF	1,180	\$ 25.00	\$ 29,500
Remove Catch Basin	EA	6	\$ 500.00	\$ 3,000
Drainage Excavation	CY	970	\$ 6.00	\$ 5,820
Storm Drain Pipe (24")	LF	4,725	\$ 90.00	\$ 425,250
Flared End Section (24" )	EA	7	\$ 600.00	\$ 4,200
Concrete Catch Basin	EA	26	\$ 5,000.00	\$ 130,000
Manhole	EA	4	\$ 3,500.00	\$ 14,000
Headwall	EA	2	\$ 5,200.00	\$ 10,400
Riprap	CY	50	\$ 60.00	\$ 3,000
Concrete Lined Ditch	SY	5,570	\$ 15.00	\$ 83,550
<i>Drainage Total</i>				\$ 708,720
Traffic Improvements	Unit	Quantity	Unit Cost	Total Cost
New Traffic Signals	EA	1	\$ 225,000.00	\$ 225,000
Relocate Traffic Signals	EA	1	\$ 100,000.00	\$ 100,000
Signing & Striping	LS	1	\$ 50,000.00	\$ 50,000
<i>Traffic Total</i>				\$ 375,000

Landscaping	Unit	Quantity	Unit Cost	Total Cost
Stamped Concrete & Pavers	SF	11,200	\$ 10.00	\$ 112,000
Landscaping (Includes Trees)	SF	77,000	\$ 3.50	\$ 269,500
Irrigation System	LS	1	\$ 135,000.00	\$ 135,000
Rock Mulch (3/4" Black Cinders)	SY	31,530	\$ 5.00	\$ 157,650
			<i>Landscaping Total</i>	<i>674,150</i>
Lighting Improvements	Unit	Quantity	Unit Cost	Total Cost
Pole (Type G)	EA	6	\$ 1,500.00	\$ 9,000
Pole Foundation (TYPE G)	EA	6	\$ 600.00	\$ 3,600
Breakaway Base	EA	6	\$ 450.00	\$ 2,700
Mast Arm (20 FT.) (Tapered)	EA	6	\$ 585.00	\$ 3,510
Underdeck Lighting	EA	3	\$ 800.00	\$ 2,400
Relocate Existing Poles	EA	2	\$ 1,050.00	\$ 2,100
Load Center Cabinet (TYPE II)	EA	1	\$ 6,200.00	\$ 6,200
Force Account Work (Electrical)	LS	1	\$ 5,500.00	\$ 5,500
Electrical Conduit (1") (PVC)	LF	60	\$ 3.00	\$ 180
Electrical Conduit (2") (PVC)	LF	2,640	\$ 4.00	\$ 10,560
Electrical Conduit (3") (PVC)	LF	264	\$ 5.00	\$ 1,320
Pull Box (NO. 5)	EA	14	\$ 275.00	\$ 3,850
Pull Box (NO. 7)	EA	1	\$ 390.00	\$ 390
Conductor (NO. 12)	LF	120	\$ 0.25	\$ 30
Conductor (NO. 10)	LF	5,280	\$ 0.50	\$ 2,640
Conductor (NO. 8)	LF	5,800	\$ 0.55	\$ 3,190
Conductor (NO. 6)	LF	8,700	\$ 0.80	\$ 6,960
Conductor (NO. 4)	LF	1,450	\$ 1.00	\$ 1,450
Conductor (NO. 2)	LF	2,904	\$ 1.25	\$ 3,630
Conductor (BARE BOND)	LF	2,964	\$ 0.55	\$ 1,630
			<i>Lighting Total</i>	<i>\$ 75,460</i>

**Estimated Earthwork Quantities**

* Earthwork , CY	Excavation	Fill	Waste
Shoofly Tracks	60,000	2,000	58,000
South Railroad Alignment	123,000	10,000	113,000
Lone Tree Road	2,000	29,000	-27,000
Route 66	2,300	7,000	-4,700
	<b>Total</b>	<b>187,300</b>	<b>48,000</b>
			<b>139,300</b>

		<i>Subtotal</i>	\$	29,427,470	
	Contingency	20%	\$	5,885,000	
		<i>Estimated Construction Cost</i>	\$	35,312,470	\$ 35,312,470
Construction Management (15% of Construction Cost)	15%	\$	5,297,000		
Engineering Design (10% of Construction Cost)	10%	\$	3,532,000		
		<i>Subtotal</i>	\$	8,829,000	\$ 8,829,000
ROW (w/15% contingency)	LS	\$	5,156,000		
Relocation (w/15% contingency)	LS	\$	677,000		
		\$	5,833,000	\$	5,833,000
		<b>Grand Total</b>	\$	<b>49,974,470</b>	
		<b>Grand Total, Rounded</b>	\$	<b>50,000,000</b>	